

DOCUMENT RESUME

ED 346 439

CS 010 962

AUTHOR Toomey, Derek
TITLE Short and Medium Run Effects of Parents Reading to Pre-School Children in a Disadvantaged Locality.
PUB DATE Apr 92
NOTE 22p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 20-24, 1992).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Family Environment; Foreign Countries; *Low Income; Parent Student Relationship; Preschool Children; Preschool Education; Program Effectiveness; *Reading Aloud to Others; *Reading Programs; Reading Research
IDENTIFIERS Australia; *Emergent Literacy

ABSTRACT

A study examined the effectiveness of an emergent literacy program designed to encourage low-income parents to read to their children. Pre-school teachers in four low-income areas in Australia read to children in their class regularly. Three books were sent home with each child twice a week and the parents were asked to read to their children. A total of 55 families were involved. A variety of literacy measures (emergent literacy development, letter recognition, recognition of environmental print with and without logos, ability to read their own name, writing development, and knowledge of concepts about print) were administered to the children, and the mothers of children were interviewed. Follow-up studies of the children's success in school literacy were carried out for the 1989 cohort in Year One (equivalent to kindergarten in the United States) and Year Three of schooling, and for the 1991 cohort in Year One. Results indicated that: (1) the project was successful in affecting the emergent literacy competencies of children from a disadvantaged locality, in that the competencies represented by the performance tests of emergent literacy competence were more advanced in the project group than in a comparison group, with controls for a range of family environment and initial competence variables; (2) by implication, it seems the project was fairly successful in encouraging parents to read with their children; and (3) the project affected emerging literacy skills which were predictive of the school literacy score. (Eight tables of data are included; 30 references are attached.) (RS)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

D.M. Joomey

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.
☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy.

**SHORT AND MEDIUM RUN EFFECTS OF PARENTS READING TO
PRE-SCHOOL CHILDREN IN A DISADVANTAGED LOCALITY***

Derek Toomey,

Centre for the Study of Community, Education and Social Change

La Trobe University

ED346439

CS010962

BEST COPY AVAILABLE

**SHORT AND MEDIUM RUN EFFECTS OF PARENTS READING TO
PRE-SCHOOL CHILDREN IN A DISADVANTAGED LOCALITY****

Derek Toomey,

Centre for the Study of Community, Education and Social Change

La Trobe University

There is voluminous evidence of the strong influence on children's school learning of their general upbringing within the family (Hess and Holloway, 1983; Toomey, 1989a). There is also good evidence of the effectiveness of schools deliberately involving parents in teaching school knowledge to their children at home (e.g. Graue et al., 1983). As far as literacy learning goes there is substantial evidence of the former kind (e.g. Teale, 1985), but not a great deal of the latter (McCormick and Mason, 1986). The West Heidelberg Early Literacy Project has been attempting to provide evidence of this kind since it began in 1987. It has concentrated on families of four year olds in a disadvantaged locality, as being particularly likely to benefit. Some success has been gained by a) working through home visits (Sloane and Toomey, 1988) and b) by working in pre-schools (Toomey and Sloane, 1991; Toomey, 1991). In both instances the project supplied books to parents to read to their children, and gave advice on other methods of fostering literacy development. Deliberate teaching of the child was not involved.

A major aim of the project has been to establish a low cost method that can be widely employed. Using home visits, and someone to visit pre-schools to manage the program

Please note that this paper was originally intended to concentrate on the follow-up data to our initial projects, but, because of very heavy attrition rates, other data from the initial studies have been included.

* Paper read to 1992 A.E.R.A. meeting, April 20-24, San Francisco.

both are relatively costly and in 1990 we repeated the pre-school based program (Toomey and Sloane, 1991) but asked the pre-school teachers to carry it out, (reported in Toomey, 1991). In 1991 a repeat of the 1990 project was carried out; follow-up studies of the 1989 and 1991 projects were also done. This paper reports those projects.

Increasingly research into literacy development has been paying attention to the influence of informal literacy learning which takes place in the pre-school years as a result of activities such as children observing print in use (Teale, 1985, 1986), observing print in the environment (Goodman, 1986) and being read stories (Teale, 1985, 1986; Wells, 1981).

A great deal of knowledge necessary for proficient reading may be learnt by the child in this way, e.g. knowledge of concepts about print (Clay, 1979), familiarity with the language of books (Teale, 1985, 1986) and familiarity with decontextualised meanings (Snow, 1983). The term 'emergent literacy' (Teale and Sulzby 1986) has been coined to refer to this stage of informal learning. Certainly, there is good evidence that reading to children in the pre-school years facilitates subsequent literacy development (Teale, 1985, 1986; Wells, 1981).

The fundamental philosophy of the project emphasises the role of the family as educator (Walberg, 1984) and the fact that family environment processes are more influential than socio-economic status in influencing children's scholastic learning (Hess and Holloway, 1983; Share et al., 1987; Toomey, 1989a). It also stresses the need to reach out to lower SES families in order to support their involvement in their children's education (Toomey, 1989b; Sloane and Toomey, 1988).

In a previous program (Sloane and Toomey, 1988) we found that the child's enjoyment of being read to was a crucial factor in encouraging lower SES parents to become involved in reading to their children. A regular supply of good books, especially short books, we also found to be important.

The approach to emergent literacy development taken in the project emphasises the development of the child from responses to oral language representations of print (as in parents reading aloud) towards responses more oriented to print as written language and to the distinctiveness of print (e.g. 'reading' with a reading aloud intonation, pointing to print, recognition of own name in print). As the child becomes more familiar with the reading process, it begins to pay more attention to the print (Harkness and Miller, 1982). In the initial phase of the project, reading with expression was thought to be especially important, but in the later stages opportunities for familiarity with particular printed texts became more important.

Methods

Pre-school teachers in four low-income areas read to the children in their class regularly, attempting to enthuse them about reading. Reading to the whole class was used, as well as reading to individuals and to small groups. Three books were sent home with each child twice a week and the parents were asked to read to their children and were sent a pamphlet explaining the advantages of this for their children's literacy development. It was hoped that the children's enthusiasm would lead them to put pressure on their parents to read to them.

There is a good deal of evidence to suggest the strong value for literacy development of the child becoming very familiar with some books (Snow, 1983; Snow, Dubber and de Blauw, 1982; Martinez and Teale, 1988; Morrow, 1988; Moerk, 1985; Dowhower, 1987) and of having repetitive elements within books (Martinez and Teale, 1988). The argument is that the familiarity and redundancy involved encourages the child's mastery.

Accordingly, after a phase in which encouraging the child's interest was paramount, the project moved to a phase, during the last seven weeks of the program, in which the child was given much contact with a small number of books. The teachers introduced class sets of short books, with repetitive elements, reading them aloud to the children several times, using a 'big book' version and sending a copy of the book home with each child. Some five books were introduced to each child in this way.

We worked from June to December, 1990 (in Australia the school year coincides with the calendar year); one of the pre-schools was deliberately chosen to have a high proportion of first generation immigrant families. A total of 55 families were involved. We also used a comparison group of 36 families drawn from the same pre-schools, which had been used in the previous year of the project (Toomey and Sloane, 1991).

We used identical measures to evaluate the home backgrounds and literacy competences and development in both the project and comparison families.

MEASURES USED:

Literacy Competence

The children were tested in the pre-school using the Sulzby test of emergent literacy development (Sulzby, 1985). This involves the child pretending to 'read', to an adult, a

book of their choice, familiar to them. The reading is video-taped and the child's performance classified on a twelve category hierarchy from simple labelling activity to independent reading. The hierarchy reflects the transition from oral-language related responses to print-governed responses mentioned above. The Sulzby test was administered at the beginning and end of the program. In addition, the children were tested at the end of the program by asking them to choose one of the five 'familiar' books we had used, though this test was not carried out with the comparison group.

Other tests of literacy competence used in the pre-school were: letter recognition, ability to read and write own name, recognition of environmental print with and without logo and concepts about print. We also used mothers' reports of: the child's ability to write his/her name, recognition of environmental print, letter recognition, alphabet knowledge and the number of words he or she could write.

This program was repeated in 1991, though the measures used in the evaluation were slightly different (see Table 1). In 1989 a program identical to that in 1990 was run, but the work of reading to the children and distributing the books was done by workers from the research project.

Follow-up studies of the child's success in school literacy were carried out for the 1989 cohort in Year One and Year Three of schooling, and for the 1991 cohort in Year One (compare kindergarten in the USA). Shortly after the commencement of the project, each child's mother was interviewed at home and was asked to give an account of the literacy environment of the home before the project commenced, using a structured interview.

From all the above information, various scales were developed, which are included in those listed below, with the number of items and reliability coefficients previously established (Toomey and Sloane, 1991).

General Family Support for School Learning

($\alpha = .84$; items = 8) A scale indicating the general supportiveness of the family environment to school achievement. Items include: presence of rules about T.V. watching; parent watches T.V. with child; Sesame Street or Play School watched; parent discusses T.V. with child; family takes the Age newspaper; two parent family; high rating on family support for literacy learning by the interviewer; high rating by interviewer of amount of parent/child interaction during book reading sessions.

Family Literacy environment ($\alpha = .7667$; 11 items)

A scale indicating the supportiveness of the family environment for the child's literacy development. Examples are: frequency of reading to children, amount of parent-child interaction in reading episodes, family library membership, mothers reading of books.

SES ($\alpha = .7685$; 5 items)

Parents' education and occupations were the main items.

Child's interest in reading and writing ($\alpha = .7250$; 11 items)

Examples: looks at books while alone, incorporates books into play, asks to borrow and buy books, asks to write.

Parental illiteracy

A scale indicating the number of parents having reading difficulties in the family (0, 1, 2).

Ethnicity ($\alpha = .82$; items = 4)

Child's country of birth, parents' country of birth; mother's spoken language fluency; mother's ability to read English. (Information from the pre-school teachers was used for this scale). Low scores indicate mainstream characteristics.

Initial Literacy competences ($\alpha = .8169$; 9 items);

Ability to read and write name, asking of questions during reading episodes, recognition of environmental print, number of words can write, alphabet knowledge and letter recognition. (Items both from the performance tests and the mothers' reports were used).

School Literacy Score

To obtain this we used the Griffin Literacy Profile (1989), a check list of literacy competencies grouped together in a seven part hierarchy. Children are rated by their teachers, as to whether (a) they have mastered the competencies in the grouping and display them as a behaviour pattern (score 3), (b) this pattern of behaviour is developing some having been mastered, and others not (score 2), (c) the student is beginning to show the behaviour pattern (score 1), and (d) the student shows none of the behaviours in question (score 0).

The resulting seven scores are summed to produce the total score: the groupings of behaviours are based upon a substantial empirical survey of the behaviours teachers report

as relevant to assessing literacy competences and a good deal of analysis of these results, as well as the use of standardised tests to establish validity. This form of testing is particularly appropriate in a school system which has school-based curriculum development, the widespread adoption of a 'whole language' approach and little use of basal reading schemes. The literacy profiles have been officially adopted by the Victorian Ministry of Education.

In 1990 one departure from the 1989 model was that in addition, at the post-test, we repeated the performance measures of literacy competence used in the pre-test. We then compared the children's performance on these tests and on the Sulzby post-test with the performance of children from a nearby pre-school, using a post-test only comparison ($n = 42$). For this comparison a five item scale was developed from the performance tests, with an alpha reliability of .81.

Table One sets out a synopsis of the various measures and scales used in the 1989, 1990 and 1991 programs.

Results

The results show a definite effect on children's emergent literacy competences as represented by performance on the Sulzby scale, for the 1989 and 1990 programs, controlling for: age, family literacy environment, general family support for school learning, socio-economic status, ethnicity, parental illiteracy, pre-test on the Sulzby scale and children's interest in print and print knowledge/awareness (Tables 2 and 3) (Toomey and Sloane, 1991; Toomey, 1991; Toomey, 1992). Tables 2 and 3 show that the project

group scored significantly higher. Table 4 also shows, for the 1990 program an effect on the children's print knowledge as indicated by various performance tests (Toomey, 1991), a result confirmed by the 1991 study (Toomey, 1992).

Table 5 reports an analysis of variance comparing the 1989 project group and its comparison group on the school literacy score in Year One, controlling for all the variables in the data set. The results show no significant difference between the project and experimental children. However, they do show that the children's performance on the Sulzby test after the project was completed was a highly significant predictor of the school literacy score in Year one (1990). It could then be argued that the project had an indirect effect on the school literacy score, via its influence on emergent literacy, as indicated by the Sulzby Post-test. It is also of some interest that these measures of emergent literacy knowledge are predictive of school literacy (N.B. initial print knowledge was also a significant predictor). It should be noted that we have Year One data for only 66 per cent of the initial sample for whom we have complete post-test data.

These children were followed up again, in March 1992, when we obtained school literacy scores for them, by asking teachers to complete the Griffin Literacy Profiles. Only 47.2 per cent of the sample, for whom we have post-test data, are included in this analysis. Table 6 shows a non-significant difference between the project and comparison groups, the only significant co-variate being School Literacy score in Year One. It is possible to mount an argument that the project has had an indirect effect on Year Three literacy competence via its effect on the emergent literacy competences reflected in the Sulzby

Post-test in 1989, which in turn influenced school literacy competence in year One, which in turn affected school literacy in Year Three.

This amounts to an argument based on path analysis. To test this further a path analysis was conducted, assuming a causal ordering of the variables based on their temporal ordering. In addition the competences represented by the Sulzby Pre-test the child's interest in print and the child's initial print knowledge have been assumed to be causally subsequent to the family environment and home background variables. Table 7 sets out the results, with all non-significant paths excluded. It shows a strong connection between the literacy environment of the family and the child's initial print knowledge, interest in print and emergent literacy competences, as represented by the Sulzby pre-test. Project group membership has an effect on the competences represented by the Sulzby post-test, net of all the other variables in the data set. There is a direct path from the Sulzby post-test to school literacy score in Year One and from thence to school literacy score in Year Three. It can thus be claimed that membership of the project group affects the children's literacy in school indirectly via its direct effect on emergent literacy competences as represented by the Sulzby post-test.

Table 8 shows the effect on the Year One school literacy score for the 1991 cohort controlling for all the variables in the data set (N.B. that ethnicity and parental illiteracy were not included in 1991). We managed to obtain usable returns in Year One for the 1991 cohort for only 35 per cent of cases, the total involved being 36. It is not, then, surprising that the results showed no significant effect of the project on school literacy in Year One and no significant predictors from the data-set for school literacy in Year One.

CONCLUDING REMARKS

There seems little doubt that the project has been successful in affecting the emergent literacy competences of these children from a disadvantaged locality. The competences represented by performance on the Sulzby test and the other performance tests of emergent literacy competence (letter recognition, recognition of environmental print with and without logo, ability to read own name, writing development and knowledge of concepts about print) were more advanced in the project group than the comparison group, with controls for a range of family environment and initial competence variables.

By implication, it seems that the project was fairly successful in engaging parents in this disadvantaged locality in reading with their children. We did not, however attempt to gather evidence on the frequency or manner of parents' doing this. (In an analysis not reported here, we found no significant connections between the children's borrowing or returning books and the literacy outcomes in the study.) The implementation of the project is discussed in Toomey (1992).

As to the effects of the project on literacy performance in school, we were able to show no significant differences between the members of the project and comparison groups. However, the project did affect emergent literacy skills and these were predictive of the school literacy score. This is all that the project intended.

It may be argued that the connection is a tenuous one and rests on assumptions about the connections between emergent literacy and school literacy which are only just beginning to be established.

It is worth noting that we do not have a great deal of evidence based on experiments or quasi-experiments to support the very strong belief to be found in the literature (Vukelich, 1984) about the benefits for school literacy which flow from parents reading to children in the years before school. We have a long way to go before the connections between emergent literacy and school literacy are properly understood. However, the project does offer some support for this belief and for the value of a fairly low-cost method of promoting children's literacy in disadvantaged localities.

Table 1: Measures used in 1989, 1990 and 1991 Projects

	1989	1990	1991
Age	X	X	X
Family literacy environment	X	X	X
General family support	X	X	X
Ethnicity	X	X	
Parental illiteracy	X	X	
Socio-economic status	X	X	X
Child's interest in print	X	X	X
Child's initial print knowledge	X	X	X
Post-test of child's print knowledge		X	X
Sulzby pre-test	X	X	X
Sulzby post-test	X	X	
<u>Follow-up studies:</u>			
School literacy score in Year One (November)	X		X
School literacy score in Year Three (March)	X		

Table 2: Comparison of 1990 Project and 1989 Comparison Group on Sulzby post-test controlling for: Sulzby Pre-test and child's interest in reading and writing.

<u>Mean</u>			
	<u>1990 Project Group</u>	<u>1989 Comparison Group</u>	
	4.68	3.69	
	(N = 56)	(N = 32)	
<u>Co-variates</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig. of F</u>
General family support	.224	.101	.751
Sulzby Pre-test	33.923	15.362	.000
Ethnicity	1.281	.580	.449
Child's initial print knowledge	.355	.161	.690
Child's initial interest	10.044	4.548	.036
Family literacy environment	3.180	1.440	.234
SES	.438	.198	.657
Parental illiteracy	1.607	.725	.397
Age	.165	.075	.785

Main effects

Group	16.132	13.305	.009
-------	--------	--------	------

Table 3: Comparison of various groups on distribution of Sulzby post-test scores

	<u>Project Groups</u>		<u>Comparison Groups</u>	
	<u>1989</u>	<u>1990</u>	<u>1989</u>	<u>1990</u>
Oral language-like responses	42.4	65.1	91.5	84.3
Written language-like responses	57.5	34.0	8.7	15.6
	<u>99.9</u>	<u>99.1</u>	<u>100.2</u>	<u>99.9</u>

Table 4: Post-test only comparison with 1990 comparison group on Sulzby post-test and performance test scale

<u>Outcome Variable</u>	<u>Mean</u>	
	<u>1990 Project Group</u>	<u>1990 Comparison Group</u>
Sulzby	4.71 (n = 56)	3.79 (n = 38)
Literacy performance test scale	0.13 (n = 57)	0.18 (n = 42)

<u>Main effect</u>	<u>Mean square</u>	<u>F</u>	<u>Sig. of F.</u>
Group			
a) Sulzby	19.362	6.604	.012
b) Literacy performance test scale	2.241	4.519	.036

Table 5 Comparison of 1989 Project and Comparison Groups on School Literacy score in 1990 controlling for the child's initial competence/interest and home background as well as Sulzby pre- and post-tests: analysis of variance

<u>Mean</u>			
	<u>Project Group</u>	<u>Comparison Group</u>	
	6.21	6.16	
	(N = 47)	(N = 25)	
<u>Co-variates</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig. of F</u>
General family support	7.293	1.105	.297
Sulzby Pre-test	.414	.063	.805
Ethnicity	.000	.000	.995
Child's initial print knowledge	74.674	11.320	.001
Child's initial interest	2.364	.358	.552
Family literacy environment	3.988	.604	.440
SES	7.361	1.116	.295
Parental illiteracy	11.310	1.714	.195
Age	.848	.129	.721
Sulzby 2	46.927	7.114	.010
<u>Main effects</u>			
Group	.857	.130	.720

Table 6 Comparison of 1989 Project and Comparison Groups on School Literacy score in 1990 (Year Three) controlling for the child's initial competence/interest and home background Sulzby post-test and school literacy score in Year One: analysis of variance

<u>Mean</u>			
	<u>Project Group</u>	<u>Comparison Group</u>	
	9.59 (N = 27)	8.95 (N = 20)	
<u>Co-variates</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig. of F</u>
General family support	.057	.008	.931
School literacy score, Year One	55.234	7.261	.011
Ethnicity	.868	.114	.738
Child's initial print knowledge	5.935	.780	.383
Child's initial interest	13.029	1.713	.199
Family literacy environment	2.206	.290	.594
SES	.599	.079	.781
Parental illiteracy	.019	.003	.960
Age	.878	.115	.736
<u>Main effects</u>			
Group	.726	.095	.759

REFERENCES

- Clay, M. (1979) The Early Detection of Reading Difficulties, 2nd Ed. Surrey, England: Heinemann.
- Cochran Smith, M. (1984) The Making of a Reader, Norwood, N.J.: Ablex.
- Dowhower, S.L. (1987) 'Effects of repeated reading on second grade transitional readers' fluency and comprehension'. Reading Research Quarterly, 4, 389-406.
- Goodman, Y.M. (1986) 'Children coming to know literacy'. In Teale, W. and Sulzby, E. (eds.) Emergent Literacy, Norwood, N.J.: Ablex.
- Graue, M.E., Weinstein, T. and Walberg, H.J. (1983) 'School-based home instruction: a quantitative synthesis'. Journal of Educational Research, 76, 6, 351-360.
- Griffin, P. (1989) Literacy Profile, Melbourne: Ministry of Education
- Harkness, F. and Miller, L. (1982) 'A description of the interaction among mother, child and books in a bedtime reading situation'. Paper presented at Seventh Annual Boston Conference on language development.
- Hess, R.D. and Holloway, S.D. (1983) 'Family and School as educational institutions'. In Parke, R.D. (ed.) Review of Child Development Research Vol.7 The Family, Chicago: University of Chicago Press.
- McCormick, C.E. and Mason, J.M. (1986a) 'Intervention procedures for increasing pre-school children's interest in and knowledge about reading'. In Teale, W. and Sulzby, E. (eds.) Emergent Literacy, Norwood, New Jersey: Ablex.
- McCormick, C. and Mason, J. (1986b) 'Fostering reading for headstart children with predictable books'. Paper read to A.E.R.A. Conference, San Francisco, April 1986.
- Martinez, M. and Teale, W.H. (1988) 'Reading in a kindergarten classroom library. The Reading Teacher, Feb. 1988.
- Moerk, E. (1985) 'Picture book reading by mothers and young children and its impact upon language development'. Journal of Pragmatics, 9: 547-566.
- Morrow, L.M. (1988) 'young children's responses to one-to-one readings in school settings'. Reading Research Quarterly, XIII, 1, 89-107.
- Share, D.L., Form, A.J., Mathews, R. and Maclean, R. (1987) 'Parental Involvement in Reading Progress'. Australian Journal of Psychology, 22, 1, 43-51.
- Sloane, J. and Toomey, D.M. (1988) 'The West Heidelberg Early Literacy Project: a work in progress report'. Melbourne: Centre for the Study of Community, Education and Social Change.

Snow, C. (1983) 'Literacy and language: relationships during the pre-school years'. Harvard Education Review, 53: 165-189.

Snow, C.E., Dubber, C. and De Blauw, A. (1982) 'Routines in mother-child interaction'. In Feagaans, L. and Farran, D.C. (eds.) The Language of Children Reared in Poverty. New York: Academic Press.

Sulzby, R. (1985) 'Children's emergent reading of favourite story books: a developmental study'. Reading Research Quarterly, 20.

Teale, W.H. (1985) 'The beginnings of reading and writing'. In Sampson, M. (ed.) The Pursuit of Literacy, Dubuque, Iowa: Kendall/Hunt.

Teale, W. (1986) 'Home background and children's literacy development'. In Teale, W. and Sulzby, E. (eds.) Emergent Literacy, Norwood, New Jersey: Ablex.

Teale, W.H. and Sulzby, E. (1986) 'Emergent literacy as a perspective in examining how young children become readers and writers'. In Teale, W.H. and Sulzby, E. (eds.) Emergent Literacy, Norwood, New Jersey: Ablex.

Toomey, D.M. (1991) 'Parents listening to their children read: a review of British and Australasian studies: lessons for school practice'. Paper read to American Educational Research Association Annual Meeting, Chicago, April, 1991.

Toomey, D.M. (1989a) 'Linking class and gender inequality: the family and schooling'. British Journal of Sociology of Education, 10,4, 389-402.

Toomey, D.M. (1989b) 'How home-school relations policies can increase educational inequality'. Australian Journal of Education, 33, 3, 284-298.

Toomey, D.M. and Sloane, J. (1991) 'Developing emergent literacy for children of low socio-economic status: a pre-school based program'. Australian Journal of Reading, 14, 1, 40-49.

Toomey, D.M. (1991) 'Working with pre-school teachers and parents to improve the literacy competences of four-year olds in a disadvantaged locality'. Paper read to annual meeting of Australian Association for Research in Education, Surfers Paradise, November, 1991.

Toomey, D.M. (1992) 'Reaching out to help low income parents foster their young children's literacy competences'. Paper read to annual meeting of American Educational Research Association, San Francisco, April, 1992.

Vukelich, C. (1984) 'Parents role in the reading process'. The Reading Teacher, 37, 6, 472-477.

Walberg, H. (1984) 'Families as partners in educational productivity'. Phi Delta Kappan, Feb. 1984, 397-400.

Wells, G. (1981) 'Some antecedents of educational attainment'. British Journal of Sociology of Education, 2, 181-200.

Table 7

Multiple regression analysis for path analysis, 1989 cohortINDEPENDENT VARIABLESDEPENDENT VARIABLES

	SULZBY PRE-TEST	CHILD'S INTEREST IN PRINT	CHILD'S PRINT KNOWLEDGE	SULZBY POST- TEST	SCHOOL LITERACY SCORE YEAR 1	SCHOOL LITERAC SCORE YEAR 3
AGE			.196**			
CHILD'S INTEREST IN PRINT						
PARENT ILLITERACY SES			.304**			
ETHNICITY						
GENERAL SUPPORT LITERACY						
ENVIRONMENT	.358**	.538**	.339**			
SULZBY PRE-TEST				.409**		
CHILD'S PRINT KNOWLEDGE					.48**	
GROUP				.376**		
SULZBY POST-TEST					.356**	
LITERACY SC .ORE YR 1						.456**
LITERACY SCORE YR 3						
R^2	.207	.553	.6	.427	.487	.463
MINIMUM N	104	113	113	100	76	47

Table 8

Comparison of 1991 Project and Comparison Groups on School Literacy Score in 1992 (Year one) controlling for the child's initial competence/interest, home background, Sulzby pre-test and Print knowledge post test:- analysis of variance.

	<u>Mean</u>		
	<u>Project Group</u>	<u>1st Comparison Group</u>	
	1.13 (n=25)	1.12 (n=11)	
<u>Co-variates</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig. of F</u>
General family support	.292	1.294	.266
Sulzby pre-test	.002	.010	.922
Child's initial print knowledge	.197	.873	.359
Child's initial interest	.025	.111	.742
Family literacy environment	.002	.008	.931
SES	.335	1.481	.235
Child's post-test Print knowledge	.029	.127	.725
Age	.179	.792	.382
<u>Main effects</u>			
Group	.061	.270	.608